CLAIMS

- A system for supplying a lubricant to a pair of disc rolls of a piercing mill, comprising:
 - a storage tank of the lubricant;
- a plumbing extended from the storage tank to a position near the disk rolls;
 - a spray nozzle provided at the tip of the plumbing;
- a device for switching flow direction provided in some midpoint of the plumbing;
- a plumbing extending from the device for switching flow direction to the storage tank; and
- a device for releasing pressure in the plumbing, provided between the switching device and the spray nozzle.
- 2. The system for supplying the lubricant according to claim 1, further comprising a flow controller for controlling flow rate of the lubricant in each plumbing directly connected to the spray nozzle.
- 3. The system for supplying the lubricant according to claim 1 or 2, wherein the spray nozzle is configured so as to be flexibly directed toward the guide faces of the disc rolls in accordance with change in a size or a position of the disc rolls.
- 4. The system for supplying the lubricant according to claim
- 1, further comprising a cleaning device for the plumbing.

- 5. The system for supplying the lubricant according to claim 1, further comprising a device for supplying a solidifier for solidifying the lubricant.
- 6. An apparatus for manufacturing a seamless pipes or tubes, comprising:

a rolling mill including a plug oriented in a piercing direction, a pair of disc rolls disposed on both sides of an axis of the plug in a first plane including the axis, and a pair of main rolls disposed on both sides of the axis with a predetermined inclination to a second plane including the axis and orthogonal to the first plane; and

a system for supplying a lubricant including a storage tank of the lubricant to be supplied to the disc rolls, a plumbing extending from the storage tank to a position near the disk rolls, a spray nozzle provided at the tip of the plumbing, a device for switching flow direction provided in some midpoint of the plumbing, a plumbing extending from the device for switching flow direction to the storage tank, and a device for releasing pressure in the plumbing, provided between the device for switching flow direction and a spray port to the disc rolls of the plumbing.

7. The apparatus for manufacturing seamless pipes or tubes according to claim 6, further comprising:

a multiaxial arm to which the spray nozzle is attached and which can change a spraying direction of the spray nozzle;

and

a unit for moving the multiaxial arm forward/backward to/from the rolling mill.

8. A method of manufacturing seamless pipes or tubes by using a piercing mill having a pair of disc rolls while supplying a lubricant to the disc rolls, comprising:

supplying the lubricant to the disc rolls during piercing; circulating the lubricant in a plumbing when piercing is not performed; and

releasing pressure of the lubricant in the plumbing near a spraying port to the disc rolls.

- 9. The method of manufacturing seamless pipes or tubes according to claim 8, wherein the lubricant is sprayed toward a guide face at angles within five degrees from a center plane which is parallel to the side of the disc rolls and passes the center in the width direction of the guide face.
- 10. The method of manufacturing seamless pipes or tubes according to claim 8, wherein the lubricant is sprayed from the inlet side of a piercing mill.
- 11. Seamless pipes or tubes manufactured by a manufacturing method according to any one of claims 8 to 10.